CG70 Corrosion Thickness Gauges

Features

- Range of display & measurement options: Pulse-Echo, Echo-Echo ThruPaint™ technology
- Multiple calibration and material selection options
- Adjustable gain: -30dB to 70dB range
- Automatic gain control (AGC)
- 64 User definable setups
- High speed scan: 32 readings per second
- Differential and minimal thickness alarm modes
- Data output and storage: 12,000 readings and waveforms or B-Scans
- ElcoMaster® data management software

P-E | E-E | AGC | B-Scan | A-Scan

The CG70 range of corrosion thickness gauges with its large, easy to read display, provides users with A and B-Scan options for accurate interpretation of measurements.

The Elcometer CG70 corrosion thickness gauge is available in two models: CG70BDL and CG70ABDL.

Both models offer 2D cross sectional block view, providing a graphical representation of a material's thickness, ideal for accurate analysis and identification of pits and corroded areas.

The CG70 gauges take 32 readings per second in scan mode. The internal data logger stores up to 12,000 readings together with their waveforms. RS232 output to ElcoMaster® data management software allows ease of analysis and professional reporting.

The CG70 range has 64 user definable setups and works with a wide range of transducers which can be selected from the gauges internal menu. For a full range of transducers, please refer to the Dual Element Transducers data sheet.

The gain control function in Echo-Echo mode automatically adjusts the amplitude of the received echo, but it can be overridden using the selectable low, medium and high gain options to suit the properties of the material being measured, ideal for difficult applications.

As well as all the features of the CG70BDL, the CG70ABDL also features an A-Scan display, allowing users to fully interpret and control measurement readings. The user can select to view either the full waveform (RF) or the rectified waveform (RECT) showing either the positive or the negative cycle of the full waveform.

CG70 Corrosion Thickness Gauges

elcometer® NDT

Model & Part Number	CG70BDL	CG70ABDL
Display Mode: **Material thickness digits display** **B-Scan cross sectional display** **Combined B-Scan and digits display** **Scan bar display** **A-Scan display**	 • • • •	 • • • • + Rectified, - Rectified, Full Waveform (RF)
Measurement Mode[1]	PE & EE (ThruPaint™)	PE & EE (ThruPaint™)
Measurement Rate **Manual:** **Scan mode** **Scan bar display**	 4 readings per second 32 readings per second 6 readings per second	 4 readings per second 32 readings per second 6 readings per second
Measuring Range[2]	PE: 0.63 - 254mm (0.025 - 9.999 inches) EE: 1.27 - 102mm (0.05 - 4.00 inches)	PE: 0.63 - 254mm (0.025 - 9.999 inches) EE: 2.54 - 102mm (0.100 - 4.00 inches)
Measurement Accuracy[2]	± 1% or ±0.1mm whichever is the greater	± 1% or ±0.1mm whichever is the greater
Measurement Resolution	0.01mm (0.001 inches)	0.01mm (0.001 inches)
Velocity Calibration Range	1250 - 9,999m/s (0.0492 - 0.3937in/µs)	1250 - 10,000m/s (0.0492 - 0.3936in/µs)
Additional Features: **High speed scan mode** **Differential mode** **Limit alarm mode**	 • • •	 • • •
B-Scan display speed	15 seconds per screen	15 seconds per screen
Flaw Mode		Basic prove-up flaw detection using single element angle beam transducers
Calibration Setups	6 factory & 64 user-definable setups transferrable to and from a PC archive	6 factory & 64 user-definable setups transferrable to and from a PC archive
Gates		• PE: 1 gate; EE: 2 gates, 1 gate with hold off • Adjustable threshold
Pulser Type	square wave pulser	square wave pulser with adjustable pulse width (spike, thin, wide)
Gain	PE: selectable low, medium or high gain EE: automatic gain control (AGC)	manual or automatic gain control (AGC) with 40dB range (depending on mode selected)
Timing	20MHz with ultra low power 8 bit digitizer	20MHz with ultra low power 8 bit digitizer
Data Logging	• 12,000 readings with waveform • sequential and grid logging • Alpha numeric batch identifaction • OBSTRUCT indicates inaccessible locations	• 12,000 readings with waveform • sequential and grid logging • Alpha numeric batch identifaction • OBSTRUCT indicates inaccessible locations
Calibration Options	single, two point, velocity & material type	single, two point, velocity & material type
Transducer Probe Type	dual element	dual element
Transducer Frequency Range	1 - 10MHz	1 - 10MHz
Transducer Recognition	manual - selectable from a list	manual - selectable from a list
V-path / dual path error correction	automatic	automatic
Probe Zero	manual (via integrated probe disk)	manual (via integrated probe disk)
Display	1/8 VGA (greyscale) 62 x 45.7mm (2.4 x 1.8 inches) viewable area	1/8 VGA (greyscale) 62 x 45.7mm (2.4 x 1.8 inches) viewable area
Units (selectable)	mm or inches	mm or inches
LED Backlight	on / off / auto	on / off / auto
Repeatability / Stability Indicator	•	•
Battery Type	3 x AA alkaline	3 x AA alkaline
Battery Life (approximate)	200 hours	200 hours
Low Battery Indicator	•	•
Battery Save Mode	auto	auto
Operating Temperature	-10 to 60ºC (14 to 140ºF)	-10 to 60ºC (14 to 140ºF)
Size (w x h x d)	63.5 x 165.0 x 31.5mm (2.5 x 6.5 x 1.24 inches)	63.5 x 165.0 x 31.5mm (2.5 x 6.5 x 1.24 inches)
Weight (including batteries)	383g (13.5oz)	383g (13.5oz)
Aluminium case design with gasket sealed end caps, waterproof membrane keypad	•	•
Transducer Connector Type	LEMO	LEMO
RS232 Interface	Bi-directional	Bi-directional
Packing List	Elcometer NDT CG70BDL gauge, couplant, carry case, user manual, test certificate, 3 x AA batteries, ElcoMaster® software, transfer cable	Elcometer NDT CG70ABDL gauge, couplant, carry case, user manual, test certificate, 3 x AA batteries, ElcoMaster® software, transfer cable

[1] PE: Pulse-Echo Mode, EE: Echo-Echo (ThruPaint™) Mode
[2] Measuring range & accuracy depends on material, surface conditions and the transducer selected